means of a syringe, terminating in a nozzle so fine, that it is inserted directly into a vein, without any preliminary incision or painful dissection. By this method several cases of successful transfusion are reported in this city, not only in hemorrhage, but also in dangerous spanæmia.

Chapter XXIX. is an appendix which brings this work to a close. It treats briefly of twin labours, dorsal displacement of the arm, and the delivery of monsters. We will only quote the following rule for all cases of twin-labour: "As soon as the first child is born, apply a binder firmly on the abdomen to support the uterus, to aid it in recovering energy to complete the delivery, and to lessen the risk of hemorrhage"—which is always greater after such labours. The doctor, by the way, is so firm a believer in the advantages accruing from "the binder," that we fear he will lose caste among our enterprising brethren in Montgomery County.

In this critical analysis of Dr. Barnes' book, we have had the hardihood to differ with its gifted author on many points; and yet, after all, "there are," says the proverb, "many ways of getting to Rome," and his may prove the best. Viewed in the light of lectures, in which form most of them first appeared in the *London Medical Times and Gazette* of 1868–69, the style lacks the polished flow of the lamented William Brinton, and the colloquial informality of Sir Henry Thompson. But the originality of thought, and compactness of language, the freshness and raciness of the wood-cuts, will ever render this work an attractive one for reference; indeed, in our opinion, a more valuable contribution to the art of obstetrics has not issued from the press. The American publishers have spared no pains in the typography and general appearance of the work, whilst Dr. Dawson has, with judgment, refrained as much as possible from intercalating the text; and, if the author does not thank him for the few brackets he has ventured to introduce, we are pretty sure the reader will.

W. G.

ART. XIX.—*Surgical Memoirs of the War of the Rebellion, collected and published by the United States Sanitary Commission.* I. *On the Wounds of Bloodvessels, Traumatic Hemorrhage, Traumatic Aneurism, and Traumatic Gangrene.* II. *On the Secondary Traumatic Lesions of Bone: namely, Osteo-myelitis, Periostitis, Ostitis, Osteoporosis, Caries, and Necrosis.* III. *On Pyæmia.* By JOHN A. LIDELL, A.M., M.D., etc. etc., edited by Prof. FRANK HASTINGS HAMILTON. New York: Published for the United States Sanitary Commission, by Hurd & Houghton, 1870. 8vo. pp. xl., 586 (with wood-cuts and ten coloured plates).

THOUGH Professor Hamilton's name appears upon the title page of this volume as editor, all that he has contributed, so far as a careful perusal has revealed, consists of a short "Editor's preface," and a foot-note to page 163. The latter gives an interesting account of a case which Prof. Hamilton rather oddly calls a gunshot wound of the heart, though he expressly asserts that the ball did not touch the heart at the time of injury, but lodged near the right subclavian artery "near the inner edge of the anterior scalenus. From thence it made its way by absorption, gradually, into the right subclavian artery . . . . and from this point it slowly travelled, by pressure and absorption, into the internal jugular vein." The time occupied by the ball in reaching the heart is supposed to have been not less than five years. We fail to see why this should be called a gunshot wound of the heart, any more than the curious cases where balls entering different parts of the body have been passed by stool, should be classed together as gunshot wounds of the anus.

A statement in the *Editor's* preface that this volume embraces "all the more recent observations upon the topics discussed," is adapted to excite surprise, particularly as on the next page we find an honest confession from the *author* that his work has been revised merely down to the fall of 1867. Surely Prof. Hamilton does not wish us to believe that, because the Sanitary Commission has been inactive for the last three years, science has been equally torpid!

Leaving now the editor's part of the work, we are prepared to consider this handsome volume as the production of Dr. Lidell, who is well known to our readers, from various contributions to this Journal, as one of the most prolific as well as one of the most able writers who have illustrated the surgical history of the late "War of the Rebellion."

Dr. Lidell's first monograph or first section is "On the wounds of blood-vessels, traumatic hemorrhage, traumatic aneurism, and traumatic gangrene." It is divided into thirteen chapters, which are respectively devoted to—1. Traumatic hemorrhage. 2. General considerations touching primary hemorrhage from gunshot wounds, or battle-field hemorrhage. 3. The wounds of arteries, (1) punctured, (2) contused, (3) lacerated, (4) gunshot, and (5) incised. 4. Traumatic aneurism. 5. Wounds of the veins. 6. Arterio-venous aneurism. 7. Wounds of the heart. 8. The spontaneous arrest of hemorrhage from wounded arteries, and the means by which it is effected. 9. Intermediary hemorrhage. 10. Secondary hemorrhage. 11. The surgical treatment of traumatic and especially of secondary hemorrhage. 12. Parenchymatous hemorrhage; and 13. Consecutive gangrene, or mortification resulting from the injury of blood-vessels.

Upon all of these subjects our author's remarks are interesting and generally judicious. His views coincide on most points with those of the leading authorities of the present day, with whose works he is evidently familiar, and of which, as well as of the writings of the military surgeons of the early part of the century, he has ably availed himself in the construction of his own work. He has besides given a *clinical* aspect to his pages by the introduction of numerous cases, many of which are original, and all of which serve an excellent purpose in illustrating and enforcing the precepts laid down in the text. Perhaps the most interesting part of this section is that which treats of *Parenchymatous hemorrhage*, a subject which, as Dr. Lidell justly observes, has not received as much attention as it deserves, at least in the text-books of our own language, though he is mistaken in supposing that it did not attract the attention of the older military surgeons, for it is distinctly if briefly described by Dr. John Thomson, in his "Report of observations made in the British Military Hospitals in Belgium, etc." (Edinburgh, 1816), who says that it usually occurs from the 20th to the 35th day, and who believes it to have been referred to in a passage which he quotes from Le Dran. The credit, however, of pointing out the connection between the occurrence of this form of hemorrhage and of thrombosis in pyæmic cases, is probably due, as remarked by our author, to the distinguished surgeon-in-chief of the Schleswig-Holstein Army, Dr. Louis Stromeyer, whose observations on this subject were published in 1850. By the term *parenchymatous hemorrhage*, which is borrowed from Stromeyer, is meant that troublesome form of capillary oozing which the French call bleeding "*en nappe.*" When occurring as a form of *primary* or of *intermediary* (consecutive) hemorrhage, it is due to the dilatation of the capillary vessels which results from the inflammatory process, and which prevents them from contracting when divided, or allows them to yield when the force of the circulation is increased in reaction from the shock of an operation, the blood being at the same time forced by the artificial occlusion of the principal arteries into the smaller vessels which maintain the collateral circulation. When it occurs as a form of *secondary* hemorrhage, this parenchymatous bleeding is probably chiefly due to venous obstruction from thrombosis; it is under these circumstances frequently met with as a concomitant of pyæmia. We believe, however, that in these cases there is an additional cause of hemorrhage in a positive loss of coagulability on the part of the blood itself; a condition which obtains in pyæmia, as well as in many other forms of blood poisoning.[1] The treatment recommended by Dr. Lidell for *primary* and *intermediary parenchymatous hemorrhage* consists in the application of lint saturated with the persulphate or perchloride of iron; or, if these styptics cannot be obtained, the use of a sponge dipped in water of a temperature not less than 160° Fahr., or of the actual cautery. In cases of *secondary parenchymatous bleeding* from thrombosis, styptics and pressure may be tried; and if these fail, amputation at a higher point or ligation of the main artery. Even if the hemorrhage be checked by these methods, death will usually still occur as a result of the pyæmic condition.

While we entirely agree with most of our author's precepts as to the treatment of traumatic hemorrhage (these precepts being, indeed, as has been already observed, usually consonant with the teachings of the best modern authorities), there is one point upon which we cannot but think he is in error, if, indeed, his remarks upon the subject are not the result of some strange oversight in arranging his materials: this is in recommending, as he certainly appears to do, operative interference in cases of *primary* hemorrhage even when the bleeding has spontaneously ceased. Guthrie, indeed, went to the other extreme, and forbade operation under such circumstances, even in cases of *secondary* hemorrhage: this, however, is not the teaching nor the practice of the present day. As Erichsen well puts it, "In secondary hemorrhage . . . . the surgeon *may* proceed to adopt effectual means for the prevention of the recurrence of the bleeding after the first outbreak, even though all flow of blood have ceased when he sees the patient; and he *must* do so, and that without delay, if the hemorrhage have recurred more than once." But in a case of *primary* hemorrhage (unless the wounded vessel be exposed, when it should of course be secured), we conceive it to be the surgeon's duty *not* to resort to operative measures if the bleeding have spontaneously ceased. This rule is so well established and is founded upon such obvious reasons, that it will, we think, require much more than the one case detailed by Dr. Lidell, to erase it from its position as an accepted surgical *dictum*. Indeed we find, upon referring to our author's excellent paper in the number of this Journal for January, 1864 (from which Chapter IV. of the present work is mainly copied), that he there insists in forcible terms upon the propriety of this very rule, and declares that to ligate an artery "in such a case would be to inflict unnecessary torture upon the sufferer." Seeing that in 1864 Dr. Lidell was so clear upon this point, we are at a loss to understand why he should now have abandoned his former position, apparently upon the strength of merely one case, which occurred in 1861, and which is after all of but negative importance, for there is no proof that the patient would not have equally well recovered without the operation.

---

[1] The liability to capillary hemorrhage appears to be particularly marked in those cases where the proportion of white or colourless blood corpuscles is increased; just as in the disease which Virchow calls "Leukæmia," and Bennett "Leucocythæmia."

Another point on which we cannot agree with Dr. Lidell is in his recommendation of the *lateral* ligature in cases of wound of large veins: Gross's[1] researches, to which our author refers on the very page on which he gives the above advice, show clearly, we think, that secondary hemorrhage is much more likely to follow the use of the lateral than of the ordinary double ligature.

With these exceptions, Dr. Lidell's observations on the treatment of traumatic hemorrhage seem to us to be both founded in reason and justified by experience. The reader may be a little surprised to find the important subject of *Torsion* (which appears to be the topic in connection with the arrest of hemorrhage, which just now occupies the first place in the mind of the coming surgeon) summarily dismissed in five and a half lines. Even before the late revival of the practice at the hands of British surgeons, which it may be argued has been since Dr. Lidell's date, torsion was a matter of sufficient importance to demand more space than this in a work which professes to give of wounds of bloodvessels "a more systematic, thorough, and complete account than any before presented," and which the editor assures us constitutes a "complete and exhaustive" treatise upon the topics discussed. *Acupressure* fares no better at the hands of our author, being likewise dismissed in less than six lines: the fact that Dr. Lidell "has no experience in the employment of this procedure," surely does not warrant its being thus ignored in any account of the treatment of traumatic hemorrhage, even if not claiming to be so "systematic, thorough, and complete" as that before us.

"The metallic ligature or suture," says Dr. Lidell, "generally appears to be preferable to the silken or linen article, because of its non-absorbent properties. Thus it is not liable to become soaked with decomposing discharges; and thus it produces less irritation of the surrounding parts than the other kinds of ligature." No references are given to cases in which Dr. Lidell has employed the metallic ligature for restraining hemorrhage, and we are, therefore, somewhat at a loss to know upon what *practical* (not *theoretical*) grounds our author bases his preference for a mode of treatment which, we confess, seems to us eminently ill adapted for military practice.

To Dr. Lidell's *second section*, which discourses of the secondary traumatic lesions of bone, we turn with special interest, because the author's name is prominently associated with the subject of osteo-myelitis, and because we have a pleasant recollection of an able paper from his pen "on contusion and contused wounds of bone," which appeared in the number of this Journal for July, 1865. This section embraces five chapters, which are devoted to, 1. Osteo-myelitis; 2. Periostitis; 3. Ostitis; 4. Caries; and 5. Necrosis. *Osteo-porosis* (a porous condition of bone, resulting from inflammatory action) is discussed in connection with osteo-myelitis, ostitis, and caries, respectively. To this section belong likewise the ten coloured plates, which, we may say at once, are the most beautiful illustrations of osteo-myelitis which we have ever seen. They are all drawn from nature by Köhler, and executed in the best style of chromo-lithography, at the well-known establishment of Bowen & Co., of this city. *Osteo-myelitis* is defined by Dr. Lidell as "inflammation of the medullary tissue of bone." It is, as he very justly observes, not a new disease, though it has not until recently received as much attention as it deserves, at least in our own country. Even now a considerable number of surgical writers do not recognize the disease except in its most destructive forms—the suppurative and gangrenous—and hence has arisen a confusion of terms, which (as we have pointed out in our edition of Erichsen's *Science and Art of Surgery*) has occasionally led to most deplorable errors in treatment. This chapter we consider by far the best portion of Dr. Lidell's whole book, and we should be glad if it could be not only read, but studied by all practising surgeons. After a brief bibliographical *résumé*, which does not claim to be exhaustive, our author gives a short sketch of the physiological anatomy of the marrow, taken chiefly from Robin, through the medium of the quarterly summary of this Journal for October, 1865 (pp. 498–503). Our author's division of osteo-myelitis into the acute and chronic varieties does not seem to us a very good one (and, indeed, he himself confesses that it is not satisfactory); a more scientific classification would be one founded upon the morbid anatomy of the disease in the different stages of the inflammatory process, whether going so far merely as simple cell proliferation or lymph production, or running on to suppuration of the medullary tissue, or still further to gangrene. Thus we might speak clinically of simple, of suppurative, and of gangrenous osteo-myelitis, the former (which, as we have seen, many surgeons ignore altogether) being the variety which is met with in the union of fractures by what the older writers described as *internal callus*, and which is a very frequent, if not constant accompaniment of ostitis, and an occasional one of inflammation of the periosteum.

---

[1] See number of this Journal for April, 1867, p. 319.

Dr. Lidell very properly insists upon the distinction between osteo-myelitis and pyæmia, a distinction which, as we have shown elsewhere, was strangely ignored in the "Astley Cooper Prize Essay" of Dr. Braidwood. Osteo-myelitis is a very frequent antecedent and cause of pyæmia, and probably never its consequence; at the same time it is quite possible that *puriform* deposits (so called "metastatic abscesses") may occasionally be found, in pyæmic cases, in the medullary, as well as in other tissues of the body.

The causes, symptoms, pathological appearances, means of diagnosis and prognosis, and modes of treatment of osteo-myelitis, are well described by our author, and this chapter constitutes, upon the whole, we think, the best systematic account of the affection which has yet appeared in our language. With regard to the local treatment of osteo-myelitis, Dr. Lidell very properly lays stress upon the importance of free incisions, and recommends trephining in certain cases of the disease, especially of the suppurative variety, and when confined to a limited portion of the bone. We believe that even in the non-suppurative forms of osteo-myelitis advantage may be derived from the plan recommended by Erichsen in cases of ostitis, viz., making a longitudinal section through the compact tissue by means of a Hey's saw. The operation is less severe than that of trephining, while the relief from tension is equally well attained. If, however, medullary suppuration have actually occurred, it would probably be better to remove a portion of the compact wall of the affected bone, either with the saw or trephine, as was done with the most gratifying results in 1798, by the late Dr. Nathan Smith.[1]

Amputation or *disarticulation* are often required in cases of acute suppurative or gangrenous osteo-myelitis, and have been occasionally successful even when performed after the onset of pyæmic symptoms. When the medullary inflammation runs a less rapid course, amputation should not, we think, be usually performed, unless the disease has invaded the epiphyses, involving the neighbouring joints (pyarthrosis). Under the latter circumstances, removal of the affected limb may be practised with the best results, as in a case in which we amputated at the shoulder-joint for osteo-myelitis of the humerus, with pyarthrosis of shoulder and elbow, the result of a fall upon the ice.

An interesting case is cited by Dr. Lidell from the practice of Prof. Van Buren, in which osteomyelitis of the tibia was followed by spontaneous separation of the upper epiphysis: this case, our author believes to be the only one of the kind on record, with the exception of thirteen described by Klose, of Breslau, and two described by Gosselin. We ourselves several years ago, reported such a case, in which the part affected was the upper epiphysis of the humerus, although we confess that we did not appreciate the significance of the phenomenon at that time (see No. of this Journal for April, 1862, p. 414): we may add that Mr. Holmes refers to a specimen in St. Bartholomew's Hospital Museum, which shows "the head of the femur which had separated in the course of an attack of acute pyæmia, and was found lying loose in the cavity of an abscess which had formed in the joint."[2]

Chapters II. and III. of this section treat respectively of periostitis and ostitis, but present no features calling for special comment. In Chapter IV., Dr. Lidell takes up the consideration of caries, which he defines simply as "ulceration of the osseous tissue." This is, we think, upon the whole, the most philosophical, as it is certainly the most comprehensible definition of the term, but, to be consistent, we must adopt the converse proposition, and say that ulceration of bone is caries. This statement Dr. Lidell apparently does not agree to, at least he seems to recognize in a foot-note another form of osseous ulceration; as being "required to effect the separation of necrosed fragments." The fact is, however, that though we may have necrosis with caries (just as we may have gangrene with ulceration), the natural separation of necrosed portions of bone is in the large majority of instances effected, like that of gangrenous soft parts, *not* by ulceration but by granulation; the removal of a sequestrum, as every one knows, does not leave a *carious* cavity, but a granulating surface due to the rapid proliferation of living bone tissue, a process to which Ollier gives the expressive name of medullization. Dr. Lidell's remarks upon caries, though brief, are interesting and judicious: it may cause surprise, however, that, under the head of treatment, no mention is made of the use of the *Liqueur de Villate*, so highly commended by M. Notta, or of the seton, an application praised by Bromfield, and recently brought prominently before the profession by Prof. Sayre, of Bellevue Hospital.

Chapter V., "Of Necrosis," demands particular attention, because in it Dr. Lidell describes a disease of bone which he calls "Mephitic or wet gangrene," which he considers to have been hitherto unnoticed, and of which he says in the preface, "It is believed that this subject is quite new." We quote our author's account of this affection in his own words.

---

[1] Medical and Surgical Memoirs, p. 109.

[2] Surgical Treatment of Children's Diseases, p. 423.

> "The contrast in appearance between that presented by a piece of bone involved in necrosis [which Dr. Lidell defines as dry gangrene of bone] and another piece of bone involved in mephitic gangrene is very strongly marked. The difference in appearance is even more striking than that which obtains between the wet and the dry gangrene of the soft parts. *Necrosed bone is dry, hard, white or yellowish-white in colour, insensible, sonorous when struck, and comparatively inodorous. But osseous tissue invaded by mephitic gangrene is moist, more or less softened in consistence, not unfrequently the softening is considerable, dirty gray, dirty pale-green, or dirty greenish-brown in colour, and it exhales the intolerably offensive odour of rotting bone.* Necrosed bone bears a strong resemblance to the bleached osseous tissue of the skeleton in appearance. Gangrenous bone (mephitic) does not present any such resemblance. We will take this opportunity to remark further, concerning mephitic gangrene of bone, that it is not unfrequently met with in military practice in connection with traumatic lesions of the osseous tissue. I have seen it occur in a case of gunshot contusion of the femur. I have met with it in a case of gunshot fracture of the thigh. I have seen it in other instances of compound comminuted fracture of the long bones. I have also met with it several times in the stump bones of amputated limbs. Mephitic gangrene of the osseous tissue is often associated with pyæmia, ... although it does not absolutely depend for its occurrence upon pyæmia, still [it] belongs exclusively to certain depressed conditions of the vital powers—to certain depraved states of the body at large . . . . The local disease with which it was always associated, according to my observations, was inflammation of the medullary tissue of the affected bone; but the relationship between them appears to me, for the most part, to have been purely accidental, and the real cause of this peculiar rot of the osseous tissue should be sought for elsewhere, and generally in a depraved condition of the whole body, but more especially of its circulating fluids."

Dr. Lidell mentions two cases of mephitic gangrene of bone which he published in the numbers of this journal for April and July, 1865. On referring to them we find it stated, in one case, that "the *compact tissue* was *white* and the *marrow dirty grayish-brown in colour*, and *very offensive in odour*" [No. for April, 1865, p. 301], while it is said in the other case that "*On section with a saw, the gangrenous osseous tissue presented a dirty dark-green or greenish-brown colour, and an offensive odour of putrefaction;*" so that we infer that the description of the physical characters given above applies, not to the compact structure, but to the medullary tissue of the affected bone.

Though Dr. Lidell is, we believe, correct in thinking that this form of osseous disease is not usually recognized as a distinct affection by surgical writers, we cannot but think that he is mistaken in believing that it has been hitherto unobserved; thus Bromfield speaks of bones being made "rotten, even to their centre," as the result of "violent contusion or fracture," while Léveillé (quoted by Ribes) attributes to Brugnone and Penchienati (*anno* 1787) the observation that when necrosis originates from disease of the medullary cavity the marrow itself is destroyed or *putrefied* as well as its envelope. Cloquet and Bérard again clearly recognize the variation in colour in different specimens of dead bone, and quote Wilson as saying that necrosis of the compact tissue is white, but of the spongy portion of bone, yellow, brown, or black. Now although the above expressions—rotten, putrefied, etc.—may of course be only figurative, we confess that it seems to us more natural to suppose that the authors using them did actually recognize a form of dead bone which bears the same relation to ordinary necrosis, that moist does to dry gangrene of the soft parts. Coming down to modern times we find in Holmes' well-known work on the surgery of childhood, a case in which, eleven days after the removal of an ordinary sequestrum from the popliteal space, the patient died "with no rigors, or any distinct evidence of pyæmia," the autopsy showing the periosteum entirely separated from the femur "from the epiphysis below, nearly to the middle of the bone, all of which seemed in process of dying; the medullary tissue was quite black" (page 406). We have ourselves been long practically familiar with the fact that dead bone was met with in these two forms, and can recall more than one case in which the appearances so vividly described by Dr. Lidell as belonging to mephitic gangrene were present. This form of dead bone, or, as we should like to call it, moist necrosis, is chiefly seen we believe in bones which contain a large proportion of spongy tissue (we have seen it well marked in the astragalus), but may also occur in the long bones, as the result of violence which *suddenly* deprives the part of its vitality: thus it may be seen in cases of fracture, in what Dupuytren called the primary splinters (if these be allowed to remain), or as the result of violent osseous contusion, such as is especially met with in military practice. The decision of the question whether in any particular case, death of bone shall take the form of ordinary necrosis, or of this moist variety of gangrene, which Dr. Lidell calls mephitic, depends, we believe, not upon the constitutional condition of the patient, but upon the local state of the part affected at the moment of death, whether full or not of blood and other fluids. Thus, if the whole thickness of a long bone is killed *suddenly and at once*, the marrow being full of blood, the gangrene will probably be of the *moist* variety, while if, as is ordinarily the case, the death of the part results from a *slow* process (*ostitis*) there will be a deficiency of fluid, and we will have *dry* gangrene, constituting the common form of necrosis. The state of affairs is precisely analogous to that which determines the form of gangrene in soft tissues, and the explanation we have suggested is that which Mr. Coote has given and ably defended, as accounting for the occurrence of moist or of dry gangrene in ordinary cases of mortification. (*Holmes' Syst. of Surgery*, 2d edit., vol. i. p. 152.)

By the above comments we do not wish to appear in any degree to detract from Dr. Lidell's merit, as being the first to point out clearly, in print, the distinctive characters which mark these two forms of osseous gangrene. Though we do not agree with the explanation which he gives of the phenomena in question, we fully recognize the value of his remarks upon the subject.

We are glad to observe that, in this section, Dr. Lidell has made so much, and, we may add, such judicious use of our long review of Ollier's *Traité Expérimental et Clinique de la Régénération des Os, etc.*, which was published in the number of this Journal for January, 1868; nor do we complain that Dr. Lidell has thought proper, in doing so, to ignore the reviewer's share in the matter, and to quote in every instance his words as if they were taken directly from Ollier himself. The reviewer (like Johnson's lexicographer—a harmless drudge) must expect to spin his brains for the benefit of others; being satisfied to find his labour, like virtue, its own sole reward. Had Dr. Lidell, however, deigned to hint that his knowledge of Ollier's work was entirely obtained through the medium of a review, he might have avoided the rather awkward mistake of quoting as he does on pages 417 and 449, a sentence as Ollier's, which has no equivalent in the French surgeon's text, and for which that harmless drudge, the reviewer, is entirely and solely responsible.

So much space has been occupied with the first and second sections of Dr. Lidell's volume, that we are compelled to omit noticing the third ("On Pyæmia"), which we regret the less, because, as this part of the book is brought down only to the latter part of 1865, it is now, of course, quite out of date. No notice is taken of the labours of Callender, Savory, Bristowe, or Braidwood, to say nothing of Cohnheim, whose views, if accepted, are, we need hardly say, likely to completely revolutionize our ideas as to the possibility of pus entering the circulation.

Looking upon this volume as a whole, we cannot avoid a certain feeling of disappointment. The papers which Dr. Lidell contributed in former years to this Journal were so very good, that our expectations were possibly thereby raised to an unreasonable pitch; and we are sorry to find the contents of this book neither so new nor so exhaustive of the subjects discussed as we had anticipated. We are particularly sorry for this, because the book, from its semi-official character, as published by the Sanitary Commission, will excite more attention abroad than if it were merely issued upon the responsibility of an individual. More than this, the whole book comes, to use an old expression, as it were, "the day after the fair;" the "War of the Rebellion" is over; its lessons have been taught, and, we think, pretty well learned by those who are not past learning anything at all; and though the Horatian nine years of probation may improve the quality of poetry, any researches in so progressive a science as that of surgery must lose their freshness, if even three years elapse between the writing and the reading. The bringing to light of posthumous scientific works is always of questionable expediency; but particularly so when it is not the author, but the doctrines he inculcates, that are dead before the day of publication. J. A., Jr.

ART. XX.—*The Physiology of Man; designed to represent the Existing State of Physiological Science, as applied to the Functions of the Human Body.* By AUSTIN FLINT, Jr., M. D., Professor of Physiology and Microscopy in the Bellevue Hospital Medical College, New York; Fellow of the New York Academy of Medicine; Member of the Medical Society of the County of New York; Resident Member of the Lyceum of Natural History in the City of New York, &c. &c. *Secretion, Excretion, Ductless Glands, Nutrition, Animal Heat, Movements, Voice and Speech.* 8vo. pp. 526. New York: D. Appleton & Co., 1870.

OUR readers will remember that we have already presented them with brief reviews of the first two volumes of this work. These volumes treated of the blood, circulation, respiration, alimentation, digestion, absorption, and the lymph and chyle. The volume now before us is devoted to the consideration of secretion, nutrition, calorification, ciliary, elastic and muscular movements, and to the voice and speech. In the preparation of "The Physiology of Man," Prof. Flint has endeavoured to make each volume a separate and distinct treatise, complete in itself, the full series being intended to cover the entire subject of physiology.

The first chapter of the volume just published treats of secretion in general, the relation of this function to nutrition, the mechanism of its production and of that of the excretions, and the extent to which it is influenced by the composition and pressure of the blood and by the nervous system. The structure of the various secreting organs is also described.

The second chapter is occupied with an account of the physiological anatomy of the serous, synovial, and mucous membranes, and of the sebaceous, ceruminous, and Meibomian glands. The physical characters, chemical composition, and uses of the different serous, synovial, mucous, and sebaceous fluids are carefully described.